

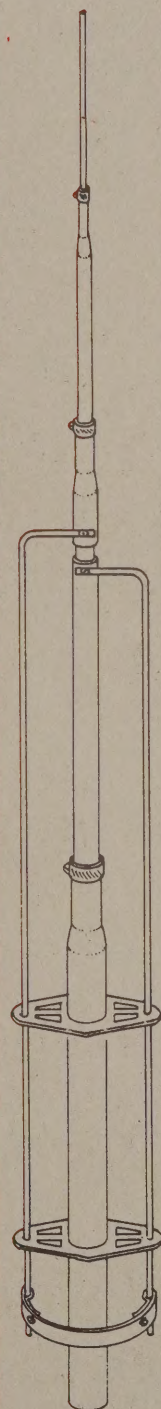
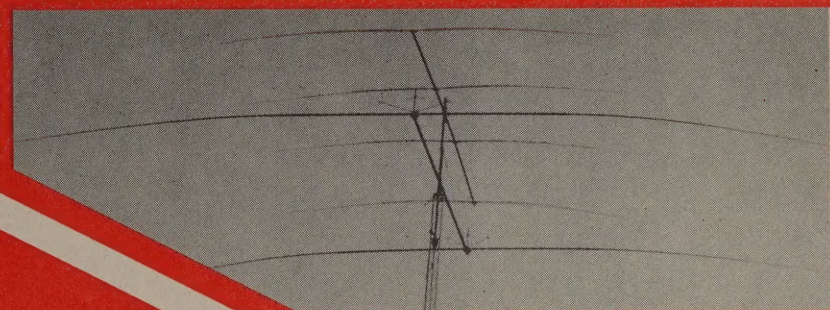
# KLM

## ANTENNAS, INC.

P.O. BOX 694 • MONROE, WA 98272

**(360) 794-2923**

FAX (360) 794-0294







*KLM* continues to build the finest communication antennas in the world. Our new manufacturing facility in Monroe, Washington will allow us to increase our production and expand our line of quality antennas. We have many new products in the research and development stage. We will announce these products as soon as they pass rigorous field testing.

#### **SHIPPING INFORMATION...**

All *KLM* antennas are shipped in heavy cardboard containers filled with expanding foam. All HF antennas marked with "\*" on the price list must be shipped motor freight. Transit time in the Continental US is approximately one week. All VHF/UHF antennas are shipped UPS ground. Next Day and Second Day UPS is available at an extra charge. Freight quotes for large antennas are at no charge. Insurance is available upon request. Damage in shipping is the transit company's responsibility. Damage **must be noted at time of delivery** in order to make damage claims.

#### **WARRANTY...**

*KLM* offers a one year warranty on parts and labor. Dealer's name, date of purchase and serial number are required to process warranty claims. *KLM* reserves the right to make revisions in current production of equipment and assumes no obligation to incorporate these changes in earlier equipment models. Replacement parts are available directly from our manufacturing facility.

#### **CONSERVATIVE RATINGS...**

*KLM's* antenna specifications are based on "real world" performance and measurements. All gain figures use the recognized half-wave dipole reference.

#### **CONSTRUCTION...**

All *KLM* aluminum components are of strong weather-resistant 6062-T832 or 6061-T832 alloy. All hardware is stainless steel except for mounting U-bolts. Plastics are the latest in ultraviolet protection. New insulator material is of tough fiberglass reinforced Polycarbonate.

As *KLM* strives for uncompromised performance and quality, we continue to press forward in technological advances with our antennas. Our philosophy is to provide you, our customer, with products, service, and engineering support that is a cut above the rest.

Bruce Scott  
President



# KLM AMATEUR ANTENNAS

## HOW KLM RATES BANDWIDTH, GAIN AND VSWR:

Bandwidth figures for almost all *KLM* antennas indicate the actual usable coverage without retuning, at the specified VSWR. With a tunable antenna like the JV2, the figures show the tuning range (144-147 MHz) followed by the operational coverage (x2 MHz) at the specified VSWR. GAIN figures, except the verticals, use the standard half-wave dipole reference (dBd) and indicate usable gain that is normal near constant across the rated bandwidth. "TYP" (typical) indicates an average figure used only with extremely broadband models such as the 10-30-7LPA. Gain figures for the 2 Meter, 1 1/4 Meter and 70 cm. lines have been carefully measured and correlated with the National Bureau of Standards Technical Note No. 688. The *KLM* gain figures may appear to be somewhat conservative when compared with other brands based on older, less exacting testing methods.

## WORLD CLASS EXTRA HF ANTENNAS...

*KLM's* World Class Extra series of antennas are designed to satisfy the needs of the most serious DX operator. The 80M-3, 40M-4 and the 20M-15M-10M 6 element monobanders offer the ultimate in performance with no compromises. The electrical designs are devised to achieve maximum gain, bandwidth, and front-to-back ratios. Construction materials and techniques are selected for maximum strength and durability. All of *KLM's* World Class Extra antennas use multiple driven elements. The average multi-element Yagi type beam antenna with only a single driven element is essentially a high Q system. Maximum gain, maximum F/B ratios, minimum VSWR and cleanest patterns are possible only over a very narrow frequency range; for example over the phone or CW portions of an amateur band. The Q of a single driven element becomes extremely high in the presence of multiple parasitic elements when these elements are adjusted for optimum performance. The Q can be reduced and the bandwidth increased by manipulating the dimensions of the parasitic elements, but at the expense of reduced gain and F/B ratios. This undesirable situation can be remedied by the use of two driven elements fed in parallel and tuned to different frequencies - one frequency near the bottom and one near the top of the amateur band. The parasitic elements can now be adjusted for maximum gain and F/B ratios rather than for broad VSWR curves. This is the familiar "log-cell" driven element system derived from log-periodic antenna design that is used in most of *KLM's* HF antenna designs. The response of *KLM* dual-driven element antennas rolls off very rapidly outside the specified band coverage thus providing an added bonus in the form of lessened radiation on adjacent frequencies. *KLM* uses boom-insulated elements throughout. This provides total isolation of the antenna elements from the boom and minimizes possible interaction effects from the boom. Exclusive *KLM* designed insulators are molded of a special glass-filled material which has excellent insulating properties and extremely high mechanical strength. The form is webbed....heavily reinforced at stress points to withstand high winds safely. To minimize unsightly "droop" in long elements, the mounting angle is tilted slightly upward.

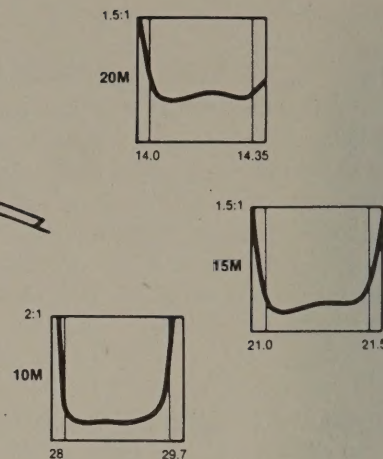
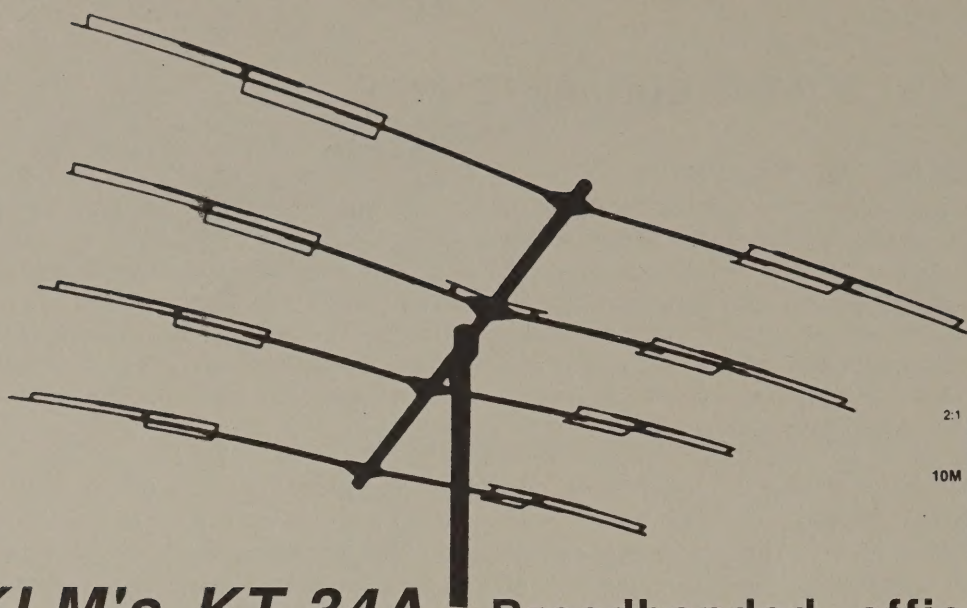
## HF MONOBAND YAGIS...

*KLM* high performance monobanders are the answer for quality installations where larger models are not practical or necessary. Moderate in size, they can be easily stacked with other beams without overloading the tower/rotor capabilities. *KLM* monobanders offer many of the superb performance and construction features of the World Class Extra series. *KLM's* dual-driven element system provides full performance and broadband coverage, in many cases across the entire amateur band! Matching problems are eliminated with the *KLM* 3-60-4:1 baluns which are rated to 5kW PEP. 6063-T832 aluminum alloy, massive insulators and stainless steel hardware (except U-bolts), along with swaged boom sections assure years of trouble-free, consistent performance. The 40M-3, 40M-4, 20M-5, 20M-6, and the 15M-6 are also available with a heavy duty boom (1/4" wall) at an additional cost. The 80M-2 and 80M-3 come with the heavy duty boom.

## TRIBANDERS...

*KLM* is world famous for its high performance tribanders. Innovative engineering and construction have produced antennas that **consistently outperform** the competition. The four element KT-34A offers an unusually compact solution for a three band high performance installation. The six element KT-34XA has been designed to outperform all commercially available tribanders and many monobanders as well. The high performance of these tribanders results from their innovative construction. Traps, coils, and capacitors found on conventional tribanders are replaced by lossless linear loading and high Q air capacitors constructed of aluminum tubing. These techniques coupled with *KLM's* unique dual driven element system allow broadband performance with high gain and low VSWR remaining nearly constant across the three bands. The KT-34A can be upgraded to the KT-34XA at any time. The boom length of the KT-34A is doubled, and one tri-resonant and one full size 10 meter element is added. These changes increase the gain to 11-11.3dBd on 10M, 9-9.5 dBd on 15M, and 8.5-9 dBd on 20M.





## KLM's KT-34A...Broadbanded, efficient, compact!

The KT-34A is a very special antenna, representing the first significant step forward for tribander design in 20 or more years. It is made for the amateur and the equipment of today, and advanced enough to meet the challenges of the future.

What makes the KT-34A so different from a conventional tribander? Basically, the traps, coils, and capacitors have been discarded in favor of lossless linear-loading and Hi-Q air capacitors, all composed of aluminum tubing! These allow the KT-34A to handle 5kW PEP at an unusually high level of **efficiency**. The linear loading also makes full 1/4-wave elements possible on 10 and 15 meters, and brings 20 meters much closer to the desirable 1/4-wave than any conventional tribander (the sketch below shows the remarkable metamorphosis of the KT-34A design).

Two driven elements are employed to make the KT-34A unusually **broadbanded** (a concept applied to most KLM antennas). VSWR and performance remain nearly constant across each of the three bands (see the VSWR charts). A KLM balun is supplied to allow direct feed from your 50 ohm coax.

Structurally, the KT-34A is build tough. No boom support is required. All the aluminum, including the boom, is strong weather resistant 6063-T832 alloy. All the hardware is stainless steel except for the mounting U-bolts. Virtually indestructible Lexan insulators support the elements and insulate them from the boom. Rotation is possible by most any ham rotor. Wind balance and wind survival are excellent. Boom length is only 16 feet.

To meet your future needs, the KT-34A is easily expandable. The KT-34XA Upgrade Kit, which adds two new elements and doubles the boom length, produces substantial increases in performance. Your KT-34A cannot become obsolete!

A great deal of thought and care has gone into the design of this antenna. It's not just another "me too" tribander, but one developed from modern techniques, materials and engineering. We hope you will give it a try. We know you won't be disappointed....

### KT-34A SPECIFICATIONS

#### Frequencies of operation:

14.0-14,350 MHz

21.0-21,450

28-29,750

**Gain:** 7 dBd  $\pm$  .3 dB across each band

**F/S:** 30 dB

**F/B:** 20 dB

**Feed impedance:** 50 ohms with balun supplied

**Power rating:** 5kW PEP

**Boom:** 16 ft. x 3 in. O.D.

**Mast:** for 2 in.O.D. (standard)

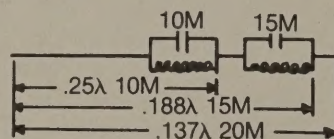
**Element length:** 24 ft. average

**Turning radius:** 16 ft.

**Wind area:** 6 sq. ft.

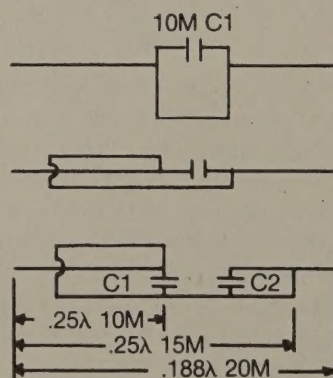
**Wind survival:** 100 M.P.H.

**Weight:** 45 lbs



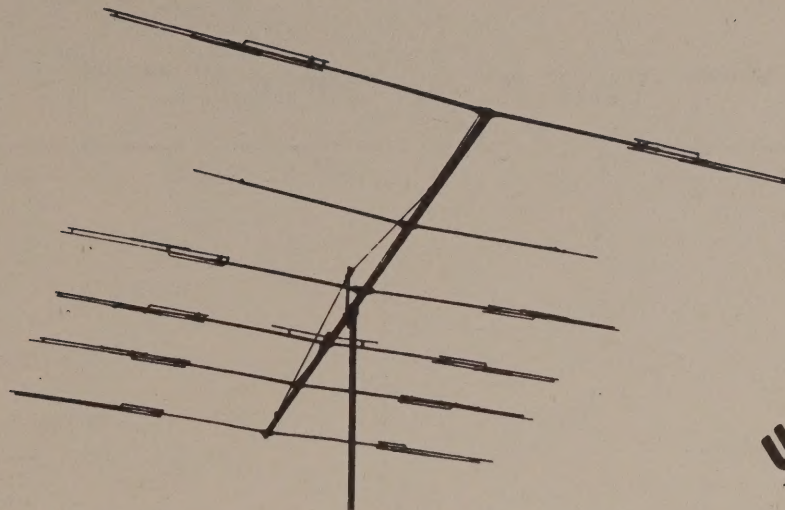
Conventional tribander element

#### Development of the KT-34XA Element



1. Replace coils with lossless linear loading.
2. Fold back and symmetrically place linear loading for mechanical strength and balance.
3. Extend element to 1/4 wave on 15M. Fold back and decouple tip with C2.
4. Extend tip for 20M. Tuning of 15 and 20M is independent.





**U.P.S. SHIPPABLE**

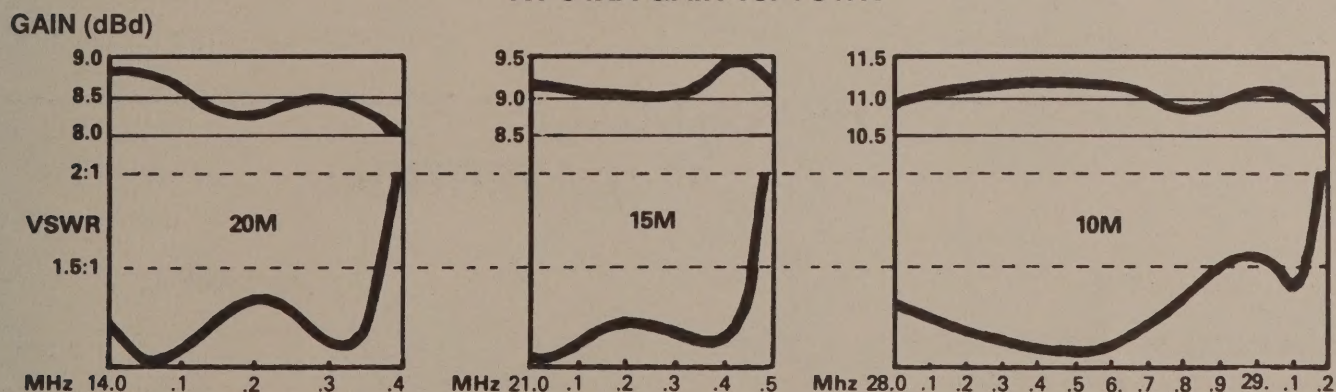
## KLM's KT-34XA

**Outperforms ALL commercially available tribanders and many monobanders, too!**

KLM's KT-34XA TRIBANDER is the 2nd generation of unique antennas designed to provide superior **broadband** coverage on 20, 15, and 10 meters. The combination of lossless linear loading and hi-Q air capacitors enables the KT-34XA to outperform **all** commercially available tribanders and meet or exceed the performance of a conventional stacked monoband system. The lower weight and windload of a single antenna means reduced tower and rotator requirements. Thus, overall system costs can be kept to a minimum while enjoying the best of monobander-type performance.

KLM's field proven KT-34A is the heart of the "XA" model. The boom length of the "A", however, has been doubled, and one tri-resonant and one full size 10 meter element have been added. These changes increase the gain to **11-11.3 dBd** on 10M, **9-9.5 dBd** on 15M, and **8.5-9 dBd** on 20M. Two driven elements are used to make the KT-34XA unusually broadbanded (a concept applied to many KLM antennas). Gain is virtually flat across each band except for 10 meters which has been optimized for the DX'er, 28-29 MHz. The chart below shows the remarkable performance qualities of the KT-34XA.

**KT-34XA GAIN vs. VSWR**



Mechanically, the KT-34XA has been built to survive the toughest weather conditions. All aluminum, including the boom, is strong 6063-T832 alloy. All electrical hardware is stainless steel. Virtually indestructible "Lexan" insulators, just like those on KLM's 40 meter "Big Sticker," are used for mounting the elements and insulating them from the boom. KLM's 3-60 MHz 4:1 balun is supplied for direct connection to any 50 ohm feed line.

### KT-34XA SPECIFICATIONS

<b>Frequencies of operation:</b>	<b>Gain:</b>
14.0-14.350 MHz	8.5-9 dBd
21.0-21.50	9-9.5
28 -29	11-11.3
<b>F/S:</b> 40 dB	
<b>F/B:</b> 20 dB	
<b>Feed impedance:</b> 50 ohms with balun supplied	
<b>Power rating:</b> 5kW PEP	<b>Wt.</b> 75 lbs

**Active elements:** 20M = 5  
15M = 5  
10M = 6

**Boom:** 32 ft. x 3 in. O.D. (guy support supplied)

**Mast:** for 2 in. O.D. (standard)

**Element length:** 24 ft. average

**Turning radius:** 21.5 ft.

**Wind area:** 9 sq. ft.

**Wind survival:** 100 M.P.H.



## VERTICAL / DIPOLE

### 12-17-30V

#### ELECTRICAL

- Bandwidth ..... 30, 17, & 12 Meters
- VSWR ..... 1.5:1
- Feed Imp ..... 50 Ohms
- Balun ..... 3-60 1:1



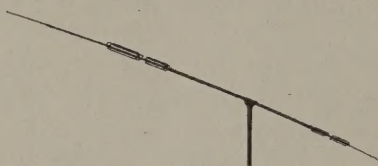
#### MECHANICAL

- Length/Height ..... 21 ft. 3 in. - (6.43 M)
- Weight ..... 6.5 lbs.
- Mast ..... 2 in. (5.08 cm)
- Windload ..... 1 sq. ft. (0.093 sq. M)

### 12-17-30D

#### ELECTRICAL

- Bandwidth ..... 30, 17, & 12 Meters
- VSWR ..... 1.5:1
- Feed Imp ..... 50 Ohms
- Balun ..... 3-60 1:1



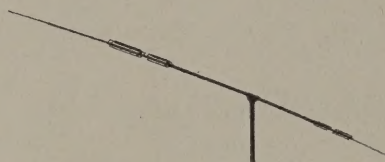
#### MECHANICAL

- Length/Height .... 39 ft. - 8.5 in. (12.10 M)
- Weight ..... 13 lbs.
- Mast ..... 2 in. (5.08 cm)
- Windload ..... 2 sq. ft. (0.186 sq. M)

### KT-31 DIPOLE

#### ELECTRICAL

- Bandwidth ..... 20, 15, & 10 Meters
- VSWR...Less than ..... 1.5:1
- Feed Imp ..... 50 Ohms
- Balun ..... 3-60 1:1



#### MECHANICAL

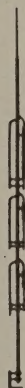
- Length ..... 24 ft. 6 in.
- Weight ..... 9 lbs.
- Mast ..... 2 in. (5.08 cm)
- Windload ..... 85 sq. ft. (.08 sz. M)

### HF VERTICALS

#### 40-10V VERTICAL

#### ELECTRICAL

- Frequency ..... 7, 14, 21, 28 MHz
- Gain ..... 0 dBd
- VSWR ..... 1.5:1
- Feed Imp ..... 50 Ohms



#### MECHANICAL

- Height ..... 26.5 ft.
- Weight ..... 23 lbs.
- Mast ..... 2 in. O.D.
- Windload ..... 1.8 sq. ft.

### SSV 80-40-15

#### ELECTRICAL

- Bands ..... 75/80,40 15M+
- VSWR ..... 1.5:1
- Feed Imp ..... 50 Ohms



#### MECHANICAL

- Height ..... 60-65 ft.
- Windload 100 MPH + Wind Survival
- Weight ..... 88 lbs.
- 3 anchors set in cement

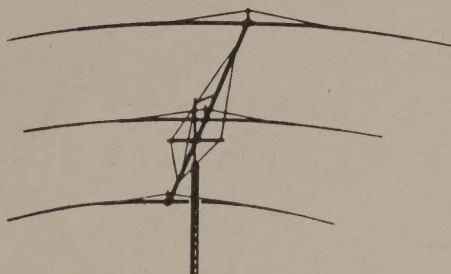


## 80 METERS

### 80M-3 World Class Extra

#### ELECTRICAL

- Bandwidth.....3.5-4.0 MHz  
x90 kHz
- Gain.....7.0 dBd
- VSWR.....1.5:1
- F/B.....18 db
- Feed Imp.....50 Ohms
- Balun.....1:1, Coax



*\*Phone/CW Switching Option  
available at additional cost.  
Order 80M-3R*

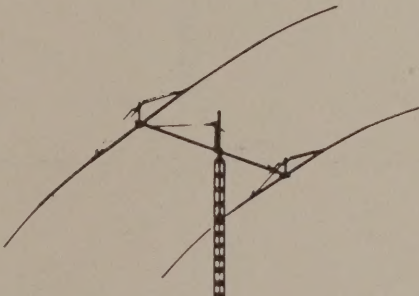
#### MECHANICAL

- Element Length.....90 ft.
- Boom Length.....60 ft.
- Boom Size.....4 in. x 1/4 in. Wall
- Turn Radius.....54 ft.
- Windload.....30 sq. ft.
- Weight.....295 lbs.
- Mast.....2 in./3 in.

### 80M-2

#### ELECTRICAL

- Bandwidth.....3.5-4.0 MHz  
x80 kHz
- Gain.....4.0 dBd
- VSWR.....1.5:1
- F/B.....12 db
- Feed Imp.....50 Ohms
- Balun.....1:1, Coax



*\*Phone/CW Switching Option  
available at additional cost.  
Order 80M-2R*

#### MECHANICAL

- Element Length.....90 ft.
- Boom Length.....36 ft.
- Boom Size.....4 in. x 1/4 in Wall
- Turn Radius.....48 ft.
- Windload.....20 sq. ft.
- Weight.....255 lbs.
- Mast.....2 in./3 in.

### 80M-1 Dipole

#### ELECTRICAL

- Bandwidth.....3.5-4.0 MHz  
x75 kHz
- Gain.....0 dBd
- VSWR.....1.5:1
- Feed Imp.....50 Ohms
- Balun.....1:1, 5 KW



*\*Phone/CW Switching Option  
available at additional cost.  
Order 80M-1R*

#### MECHANICAL

- Element Length.....90 ft.
- Turn Radius.....45 ft.
- Windload.....10 sq. ft.
- Weight.....90 lbs.
- Mast.....2 in./3 in.

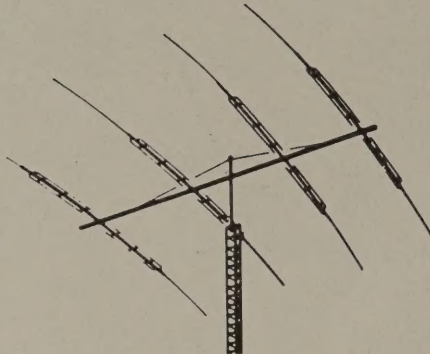


## 40 METERS

### 40M-4 World Class

#### ELECTRICAL

- Bandwidth.....7.0-7.3 MHz  
x260 kHz
- Gain.....7.2 dBd
- VSWR.....1.5:1
- F/B.....20 db
- Feed Imp.....50 Ohms
- Balun.....4:1, 5 kW



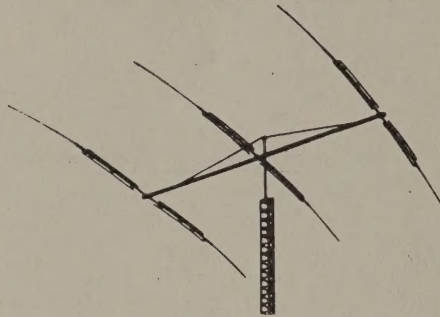
#### MECHANICAL

- Element Length.....46 ft.
- Boom Length.....42 ft.
- Turn Radius.....32 ft.
- Windload.....12 sq. ft.
- Weight.....85 lbs.
- Mast.....2 in.

### 40M-3A World Class

#### ELECTRICAL

- Bandwidth.....7.0-7.3 MHz  
x200 kHz
- Gain.....6.5 dBd
- VSWR.....1.5:1
- F/B.....20 db
- Feed Imp.....50 Ohms
- Balun.....1:1, Coax



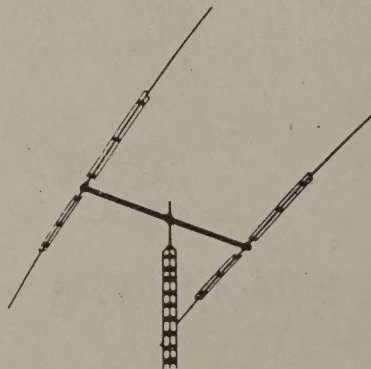
#### MECHANICAL

- Element Length.....46 ft.
- Boom Length.....32 ft.
- Turn Radius.....28 ft.
- Windload.....10 sq. ft.
- Weight.....70 lbs.
- Mast.....2 in.

### 40M-2A

#### ELECTRICAL

- Bandwidth.....7.0-7.3 MHz  
x125 kHz
- Gain.....4.9 dBd
- VSWR.....1.5:1
- F/B.....12 db
- Feed Imp.....50 Ohms
- Balun.....1:1, Coax



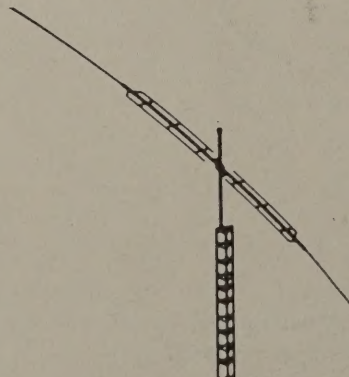
#### MECHANICAL

- Element Length.....46 ft.
- Boom Length.....16 ft.
- Turn Radius.....25 ft.
- Windload.....6 sq. ft.
- Weight.....45 lbs.
- Mast.....2 in.

### 40M-Dipole

#### ELECTRICAL

- Bandwidth.....7.0-7.3 MHz  
x75 kHz
- Gain.....0 dBd
- VSWR.....1.5:1
- Feed Imp.....50 Ohms
- Balun.....1:1, 5 kW



#### MECHANICAL

- Element Length.....46 ft., 6 in.
- Turn Radius.....23 ft.
- Windload.....2 sq. ft.
- Weight.....15 lbs.
- Mast.....2 in.



## 20 METERS

### 20M-6 World Class Extra

#### ELECTRICAL

- Bandwidth.....13.9-14.4 MHz
- Gain.....11 dBd
- VSWR.....1.5:1
- F/B.....30 db
- Feed Imp.....50 Ohms
- Balun.....4:1, 5 kW



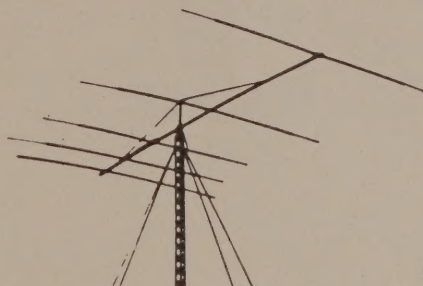
#### MECHANICAL

- Element Length.....37 ft.
- Boom Length.....57 ft.
- Turn Radius.....34 ft.
- Windload.....12.8 sq. ft.
- Weight.....95 lbs.
- Mast.....2 in.

### 20M-5

#### ELECTRICAL

- Bandwidth.....13.9-14.4 MHz
- Gain.....9.7 dBd
- VSWR.....1.5:1
- F/B.....30 db max.
- Feed Imp.....50 Ohms
- Balun.....4:1, 5 kW



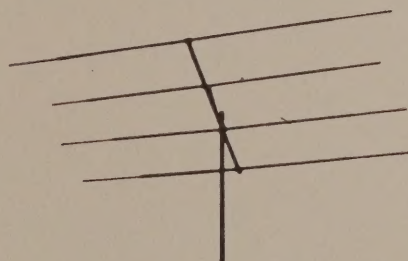
#### MECHANICAL

- Element Length.....37 ft.
- Boom Length.....42 ft.
- Turn Radius.....28 ft.
- Windload.....9.3 sq. ft.
- Weight.....65 lbs.
- Mast.....2 in.

### 20M-4

#### ELECTRICAL

- Bandwidth.....13.9-14.4 MHz
- Gain.....7.7 dBd
- VSWR.....1.5:1
- F/B.....25 db
- Feed Imp.....50 Ohms
- Balun.....4:1, 5 kW



#### MECHANICAL

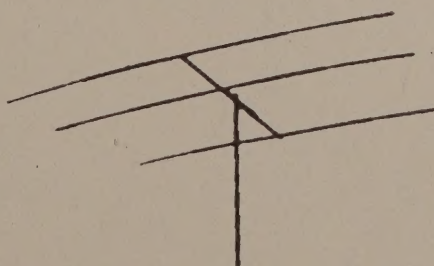
- Element Length.....37 ft.
- Boom Length.....21 ft.
- Turn Radius.....21 ft.
- Windload.....6.5 sq. ft.
- Weight.....50 lbs.
- Mast.....2 in.

## 17 METERS

### 17M-3

#### ELECTRICAL

- Bandwidth...18.065-18.170 MHz
- Gain.....6.5 dBd
- VSWR.....Less than.....1.5:1
- F/B...Greater than.....20 db
- Feed Imp.....50 Ohms
- Balun.....4:1, 5 kW



#### MECHANICAL

- Element Length.....28 ft.
- Boom Length.....3 in. O.D. X 16 ft. 9 in.
- Turn Radius.....17 ft.
- Windload.....4.5 sq. ft.
- Weight.....25 lbs.
- Mast.....2 in.

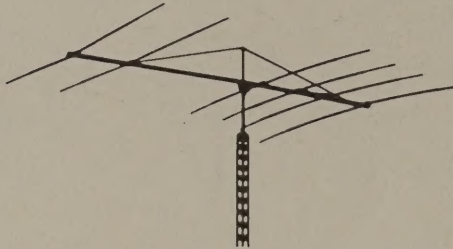


## 15 METERS

### 15M-6 World Class Extra

#### ELECTRICAL

- Bandwidth.....21.0-21.5 MHz
- Gain.....11.0 dBd
- VSWR.....1.5:1
- F/B.....30 db
- Feed Imp.....50 Ohms
- Balun.....4:1, 5 kW



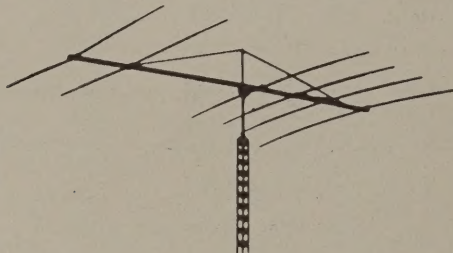
#### MECHANICAL

- Element Length.....25 ft.
- Boom Length.....36 ft.
- Turn Radius.....23 ft.
- Windload.....8.5 sq. ft.
- Weight.....60 lbs.
- Mast.....2 in.

### 15M-6LD

#### ELECTRICAL

- Bandwidth.....21.0-21.450 MHz
- Gain.....10.5 dBd
- VSWR.....1.5:1
- F/B.....30 db
- Feed Imp.....50 Ohms
- Balun.....4:1, 5 kW



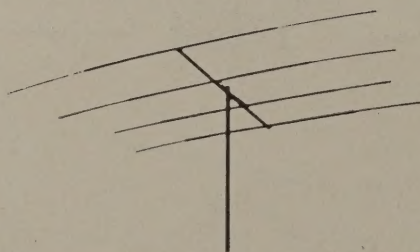
#### MECHANICAL

- Element Length.....25 ft.
- Boom Length.....36 ft.
- Turn Radius.....23 ft.
- Windload.....5 sq. ft.
- Weight.....34 lbs.
- Mast.....2 in.

### 15M-4

#### ELECTRICAL

- Bandwidth.....21.0-21.5 MHz
- Gain.....7.7 dBd
- VSWR.....1.5:1
- F/B.....25 db
- Feed Imp.....50 Ohms
- Balun.....4:1, 5 kW



#### MECHANICAL

- Element Length.....25 ft.
- Boom Length.....14 ft.
- Turn Radius.....14 ft.
- Windload.....3 sq. ft.
- Weight.....18 lbs.
- Mast.....2 in.



## 10 METERS

### 10M-6 World Class Extra

#### ELECTRICAL

- Bandwidth.....28-30 MHz  
x1 MHz
- Gain.....11 dBd
- VSWR.....1.5:1
- F/B.....30 db
- Feed Imp.....50 Ohms
- Balun.....4:1, 5 kW



#### MECHANICAL

- Element Length.....18 ft.
- Boom Length.....27.5 ft.
- Turn Radius.....16.5 ft., 8 in.
- Windload.....4 sq. ft.
- Weight.....29 lbs.
- Mast.....2 in.

### 10M-4

#### ELECTRICAL

- Bandwidth.....28-30 MHz  
x1 MHz
- Gain.....7.7 dBd
- VSWR.....1.5:1
- F/B.....25 db
- Feed Imp.....50 Ohms
- Balun.....4:1, 5 kW



#### MECHANICAL

- Element Length.....18 ft.
- Boom Length.....10 ft.
- Turn Radius.....10.5 ft.
- Windload.....2.25 sq. ft.
- Weight.....12 lbs.
- Mast.....2 in.

## HF VERTICALS

### 160V Vertical

#### ELECTRICAL

- Bandwidth.....1.8-2.0 MHz  
x20 kHz
- Gain.....0 dBd
- VSWR.....1.5:1
- Feed Imp.....50 Ohms



#### MECHANICAL

- Height.....24 ft.
- Windload.....1.4 sq. ft.
- Weight.....10 lbs.
- Mast.....2 in.

### 40-10V Vertical

#### ELECTRICAL

- Frequency.....7, 14, 21, 28 MHz
- Gain.....0 dBd
- VSWR.....1.5:1
- Feed Imp.....50 Ohms



#### MECHANICAL

- Height.....26.5 ft.
- Windload.....1.8 sq. ft.
- Weight.....23 lbs.
- Mast.....2 in. O.D.



## VHF

For 6 meters, *KLM* offers 6M-5, 6M-7LD, and 6M-7LB. For 2 meters, new offerings include the 2M-20LBX, the high-performance 2M-16LBX, and the 2M-22C circular. The 2M-16LBX is tailored for EME with a conservative gain rating of 14.5 dBd at 144 MHz, while the 2M-22C provides optimum performance for the Oscar enthusiast. Continuing in the 2 meter line are the tried-and-true 2M-4X, 2M-8, and the 2M-13LBA. For 220 MHz, three designs are available. The new general-purpose 220-14X and the high-performance long-boom 220-22LBX, as well as the 220-7 are offered.

## 6 METERS

### 6M-5

#### ELECTRICAL

- Bandwidth.....50-52 MHz
- Gain.....9.7 dBd
- VSWR.....1.5:1
- F/B.....30 db
- Feed Imp.....50 Ohms, unbal.
- Balun.....4:1, 5 kW



#### MECHANICAL

- Element Length.....57 3/4 in.
- Boom Length.....11.75 ft.
- Turn Radius.....7.5 ft.
- Windload.....1.7 sq. ft.
- Weight.....9 lbs.
- Mast.....2 in.

### 6M-7LD (Light Duty)

#### ELECTRICAL

- Bandwidth.....50-51 MHz
- Gain.....10.5 dBd
- VSWR.....1.5:1
- F/B.....30 db
- Feed Imp.....50 Ohms, unbal.
- Balun.....4:1, 5 kW



#### MECHANICAL

- Element Length.....61 in.
- Element Diameter.....3/8 in.
- Boom Length.....20 ft.
- Boom Diameter.....1.5 in.
- Turn Radius.....13 ft.
- Windload.....2.5 sq. ft.
- Weight.....12 lbs.
- Mast.....2 in.

### 6M-7LB (Long Boom)

#### ELECTRICAL

- Bandwidth..... 50-52 MHz
- Gain.....11.5 dBd
- VSWR.....1.5:1 (50-51 MHz)
- F/B.....30 db
- Feed Imp.....50 Ohms, unbal.
- Balun.....4:1, 5 kW



#### MECHANICAL

- Element Length.....61 in.
- Element Diameter.....1/2 in.
- Boom Length.....25.75 ft.
- Boom Diameter.....2 in.
- Turn Radius.....16 ft.
- Windload.....3 sq. ft.
- Weight.....22 lbs.
- Mast.....2 in.



## 2 METER

### 2M-20LBX

#### ELECTRICAL

- Bandwidth ..... Spec. 144-146  
Usable 143-148  
144-15.5 dBd
- Gain .... 145-15.5 dBd 146-15.4 dBd  
147-15.3 dBd 148-13.7 dBd
- VSWR ..... Less than.....1.5:1
- F/B ..... Greater than.....30 dB
- Feed Imp ..... 50 Ohms
- Balun ..... 4:1, 2 kW Coax
- Beamwidth ..... E = 26°, H = 28°



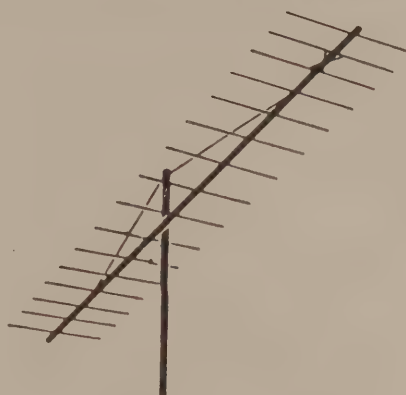
#### MECHANICAL

- Element Length ..... 40 5/8 in.
- Boom Length ..... 38.5 ft.
- Turn Radius ..... 21 ft., 10 in.
- Windload ..... 2.19 sq. ft.
- Weight ..... 17 lbs
- Mast ..... 2 in.

### 2M-16LBXM

#### ELECTRICAL

- Bandwidth ..... Spec. 144-148
- Gain ..... 144-14.5dBd  
145-14.5 /146-14.4dBd  
147-14.3 /148-13.2dBd
- VSWR ..... 1.5:1
- F/B ..... 20 dB min.
- Feed Imp ..... 50 Ohms, unbal.
- Balun ..... 4:1, 2 kW Coax
- Beamwidth ..... E = 26°, H = 29°



#### MECHANICAL

- Element Length ..... 40 5/8 in. max.
- Boom Length ..... 28 ft.  
(4.1 wavelengths)
- Turn Radius ..... 15 ft., 5 in.
- Windload ..... 2.44 sq. ft.
- Weight ..... 10 lbs.
- Mast ..... 2 1/8 in. max.

### 2M-13LBA

#### ELECTRICAL

- Bandwidth ..... 144-148 MHz
- Gain ..... 13.3 dBd
- VSWR ..... 1.5:1
- F/B ..... 20 dB min.
- Feed Imp ..... 50 Ohms, unbal.
- Balun ..... 4:1, 2 kW Coax
- Beamwidth ..... E = 28°, H = 33°



#### MECHANICAL

- Element Length ..... 40 5/8 in. max.
- Boom Length ..... 21.5 ft.
- Turn Radius ..... 13 ft.
- Windload ..... 1.6 sq. ft.
- Weight ..... 9 lbs
- Mast ..... 2 in.

### 2M-11X

#### ELECTRICAL

- Bandwidth ..... Spec. 144-146  
Usable 143-148
- Gain ..... 12.5 dBd
- VSWR ..... 1.5:1
- F/B ..... 20 dB min.
- Feed Imp ..... 50 Ohms
- Balun ..... 4:1, 2 kW Coax
- Beamwidth ..... E = 30°, H = 34°
- Mount ..... Horiz. or Vert.



#### MECHANICAL

- Element Length ..... 40 5/8 in. max.
- Boom Length ..... 15 ft., 4 in.
- Turn Radius ..... 9 ft.
- Windload ..... 1.38 sq. ft.
- Weight ..... 5.5 lbs.
- Mast ..... 2 1/8 in. max.



## 2M-8

### ELECTRICAL

- Bandwidth ..... 144-148 MHz
- Gain ..... 10.3 dBd
- VSWR ..... 1.5:1
- F/B ..... 30 dB
- Feed Imp ..... 50 Ohms, unbal.
- Balun ..... 1:1 Sleeve, 2 kW
- Beamwidth ..... 50°



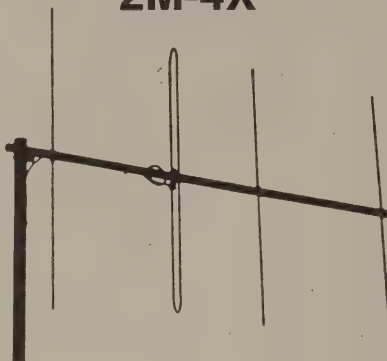
### MECHANICAL

- Element Length ..... 40 in. max.
- Boom Length ..... 7.25 ft.
- Turn Radius ..... 4 ft.
- Windload ..... 0.65 sq.ft.
- Weight ..... 4 lbs.
- Mast ..... 2 in.

## 2M-4X

### ELECTRICAL

- Bandwidth ..... 144-148 MHz
- Gain ..... 8.5 dBd
- VSWR ..... 1.5:1
- F/B ..... 29 dB
- Feed Imp ..... 50 Ohms, unbal.
- Balun ..... 4:1, 2 kW Coax
- Beamwidth ..... 62°



### MECHANICAL

- Element Length ..... 40 5/8 in.
- Boom Length ..... 4.2 ft.
- Turn Radius ..... 4 ft.
- Windload ..... 0.25 sq. ft.
- Weight ..... 2 lbs
- Mast ..... 2 in.
- Mounting ..... Rear

## 2 METER CIRCULAR

## 2M-22C

### ELECTRICAL

- Bandwidth ..... 144-146 MHz  
Usuable 144-148 MHz
- Gain ..... 13 dBc
- VSWR ..... better than 1.5:1
- F/B ..... 20 dB min.
- Feed Imp ..... 50 Ohms, unbal.
- Balun ..... 4:1 Coax, 2 kW PEP\*
- Beamwidth ..... 32°
- Ellipticity ..... 3 dB max.



*\*Derate to 250W when using  
CS-3 Switcher (supplied)*

### MECHANICAL

- Element Length ..... 41 in. max.
- Boom Length ..... 19 ft. 1 in.
- Turn Radius ..... 13 ft.
- Windload ..... 1.85 sq. ft.
- Weight ..... 11 lbs.
- Mast ..... 1 1/2-2 in.

## 2M-14C

### ELECTRICAL

- Bandwidth ..... 144-150 MHz
- Gain ..... 11 dBdc
- VSWR ..... 1.5:1
- F/B ..... 20 dB
- Feed Imp ..... 50 Ohms, unbal.
- Balun ..... 4:1, 2 kW Coax\*
- Beamwidth ..... 38°
- Ellipticity ..... 3 dB max.



*\*Derate to 250W when using  
CS-3 Switcher (supplied)*

### MECHANICAL

- Element Length ..... 40 5/8 in. max.
- Boom Length ..... 12 ft., 9 in.
- Turn Radius ..... 7 ft.
- Windload ..... 1.25 sq. ft.
- Weight ..... 7.5 lbs.
- Mast ..... 2 in.



## 220 MHz

### 220-22LBX

#### ELECTRICAL

- Bandwidth ..... 220-225 MHz
- Gain ..... 15.6 dBd
- VSWR ..... 1.5:1
- F/B Ratio ..... 20 dB
- F/S Ratio ..... 30 dB
- Feed Imp ..... 50 Ohms, unbal.
- Balun ..... 4:1 Coax, 2 kW PEP
- Beamwidth ..... E = 22°, H = 25°



#### MECHANICAL

- Boom Length ..... 29.9 ft.  
(6.65 wavelengths)
- Turn Radius ..... 16 ft., 4 in.
- Windload ..... 2.0 sq. ft.
- Weight ..... 10 lbs.
- Mast ..... 2 1/8 in. max diam.

### 220-14X

#### ELECTRICAL

- Bandwidth ..... 220-225 MHz
- Gain ..... 13.5 dBd
- VSWR ..... 1.5:1
- F/B Ratio ..... 20 dB min.
- F/S ..... 30 dB min.
- Feed Imp ..... 50 Ohms, unbal.
- Balun ..... 4:1 Coax, 2 kW PEP
- Beamwidth ..... E = 28°, H = 32°



#### MECHANICAL

- Boom Length ..... 14 ft., 7 in.  
(3.27 wavelengths)
- Turn Radius ..... 8 ft.
- Windload ..... 1.33 sq. ft.
- Weight ..... 6.5 lbs.
- Mast ..... 2 1/8 in. max. diam.

### 220-7

#### ELECTRICAL

- Bandwidth ..... 219-226 MHz
- Gain ..... 8.8 dBd
- VSWR ..... 1.5:1
- F/B Ratio ..... 20 dB min.
- F/S Ratio ..... 30 dB min.
- Feed Imp ..... 50 Ohms, unbal.
- Balun ..... 1:1 Sleeve, 2 kW
- Beamwidth ..... E = 54°, H = 60°



#### MECHANICAL

- Boom Length ..... 4.75 ft.
- Turn Radius ..... 4 ft.
- Windload ..... 0.73 max.
- Weight ..... 3 lbs.
- Mast ..... 1 1/2 in. O.D.
- Mounting ..... Rear/Center
- Weight ..... 9 lbs.



## 432 MHz

### 432-30LBX

#### ELECTRICAL

- Bandwidth ..... 430-440 MHz
- Gain ..... 17.3 dBd
- VSWR ..... 1.5:1
- F/B ..... 20 dB min.
- Feed Imp ..... 50 Ohms, unbal.
- Balun ..... 1:1, 2 kW
- Beamwidth ..... E= Plane 19°  
H= Plane 20°



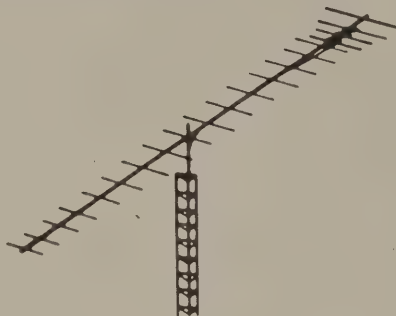
#### MECHANICAL

- Element Length ..... 14 in. max.  
(9.6 wavelength)
- Boom Length ..... 21 ft., 11 in.
- Turn Radius ..... 12 ft., 4 in.
- Windload ..... 1.71 sq. ft.
- Weight ..... 9 lbs.
- Mast ..... 2 1/8 in. max.

### 432-20LBX

#### ELECTRICAL

- Bandwidth ..... 435-440 MHz
- Gain ..... 15.3 dBd
- VSWR ..... 1.5:1
- F/B ..... 20 dB min.
- Beamwidth ..... E = 26°, H = 28°
- Feed Imp ..... 50 Ohms, unbal.
- Balun ..... 1:1, 2 kW
- Mount ..... Center



#### MECHANICAL

- Element Length ..... 14 in. max.  
(5.42 wavelength)
- Boom Length ..... 12 ft., 4 in.
- Turn Radius ..... 84 in.
- Windload ..... 0.9 sq. ft.
- Weight ..... 5 lbs.
- Mast ..... 1 1/2 in.

## 435 MHz

### 435-40CX

#### ELECTRICAL

- Bandwidth ..... Spec. 420-440 MHz  
Usable 410-450 MHz
- Gain ..... 15.2 dBdC @ 436 MHz
- VSWR ..... 1.5:1
- F/B ..... 20 dB min
- Beamwidth ..... 25°
- Feed Imp ..... 50 Ohms, unbal.
- Balun ..... 4:1, Coax 2 kW\*
- Mount ..... Center



\*250W maximum when using CS-2 Switcher (supplied)

#### MECHANICAL

- Element Length ..... 13.625 in. max.
- Boom Length ..... 175.5 in.
- Turn Radius ..... 105 in.
- Windload ..... 1.16 sq. ft.
- Weight ..... 10 lbs.
- Mast ..... 1 1/2 in. max.
- Polarity ..... Circular R.H. and L.H.  
switchable using CS-2

### 435-18C

#### ELECTRICAL

- Bandwidth ..... 420-450 MHz
- Gain ..... 12 dBdC
- VSWR ..... 1.5:1
- F/B ..... 20 dB
- Feed Imp ..... 50 Ohms, unbal.
- Beamwidth ..... 34°
- Ellipticity ..... 3 dB max.
- Balun ..... 2-4:1, 2 kW\*
- Mount ..... Center/Rear



\*Derate to 250W when using CS-2 Switcher (supplied)

#### MECHANICAL

- Element Length ..... 13.25 in. max.
- Boom Length ..... 7 ft., 4 in.
- Turn Radius ..... 7 ft. max.
- Windload ..... 0.5 sq. ft.
- Weight ..... 4.5 lbs.
- Mast ..... 1 1/2 in.
- Mount ..... Rear
- Polarity ..... Circular R.H. and L.H.  
switchable using CS-2



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## 440 MHz

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### 440-16X

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#### ELECTRICAL

- Bandwidth ..... 420-450 MHz
- Gain ..... 14.0 dBd
- VSWR ..... Less than.....1.5:1
- F/B ..... Greater than.....20 dB
- Feed Imp ..... 50 Ohms
- Balun ..... Coax "N" 4:1, 2 kW
- Beamwidth ..... E = 28°, H = 32°



#### MECHANICAL

- Element Length ..... 14 in. max.
- Boom Length ..... 10 ft. 6 in.
- Turn Radius ..... 6 ft.
- Windload ..... 0.74 sq. ft.
- Weight ..... 7.5 lbs.
- Mast ..... 1 1/2 in.
- Mount ..... Center

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### 440-10X

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#### ELECTRICAL

- Bandwidth ..... 420-470 MHz
- Gain ..... 11.5 dBd
- VSWR ..... Less than.....1.5:1
- F/B ..... Greater than.....20 dB
- Feed Imp ..... 50 Ohms
- Balun ..... Coax "N" 4:1, 2 kW
- Beamwidth ..... 48°



#### MECHANICAL

- Element Length ..... 14 in. max.
- Boom Length ..... 4.75 ft.
- Turn Radius ..... 4.90 ft.
- Windload ..... 0.53 sq. ft.
- Weight ..... 4 lbs.
- Mast ..... 1 1/2 in.
- Mount ..... Rear

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### 440-6X

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#### ELECTRICAL

- Bandwidth ..... 420-470 MHz
- Gain ..... 8.9 dBd
- VSWR ..... Less than.....1.5:1
- F/B ..... Greater than.....20 dB
- Feed Imp ..... 50 Ohms
- Balun ..... Coax "N" 4:1, 2 kW
- Beamwidth ..... 60°



#### MECHANICAL

- Element Length ..... 14 in. max.
- Boom Length ..... 28 in.
- Turn Radius ..... 2 ft., 5 in.
- Windload ..... 0.2 sq. ft.
- Weight ..... 1.2 lbs.
- Mast ..... 1 1/2 in.
- Mount ..... Rear

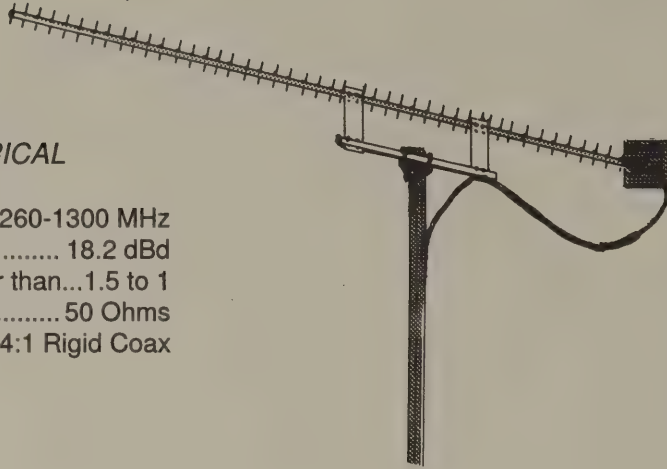


## 1296 MHz

### 1.2-44LBX

#### ELECTRICAL

- Bandwidth ..... 1260-1300 MHz
- Gain ..... 18.2 dBd
- VSWR ..... Better than...1.5 to 1
- Feed Imp ..... 50 Ohms
- Balun ..... 4:1 Rigid Coax



#### MECHANICAL

- Element Length ..... 4.5 in.
- Boom Length ..... 12 ft. 4 in.
- Turn Radius ..... 84 in.
- Windload ..... 1 sq. ft.
- Weight ..... 10 lbs.
- Mast ..... 2 in. O.D.
- Mount ..... Center

### 1.2-24LBX

#### ELECTRICAL

- Bandwidth ..... 1260-1300 MHz
- Gain ..... 16.2 dBd
- VSWR ..... Less than...1.5 to 1
- Feed Imp ..... 50 Ohms
- Balun ..... 4:1 Rigid Coax



#### MECHANICAL

- Element Length ..... 4.5 in.
- Boom Length ..... 75 3/4 in.
- Turn Radius ..... 38 in.
- Windload ..... 1/2 sq. ft.
- Weight ..... 7 lbs.
- Mast ..... Up to 2 in. O.D.
- Mount ..... Center

### 1.2-15LBX

#### ELECTRICAL

- Bandwidth ..... 1260-1300 MHz
- Gain ..... 13.2 dBd
- VSWR ..... Less than...1.5 to 1
- Feed Imp ..... 50 Ohms
- Balun ..... 4:1 Rigid Coax



#### MECHANICAL

- Element Length ..... 4.5 in.
- Boom Length ..... 42 in.
- Turn Radius ..... 43 in.
- Windload ..... 1/4 sq. ft.
- Weight ..... 4 lbs.
- Mast ..... Up to 2 in. O.D.
- Mount ..... Rear



# VHF-UHF VERTICALS

KLM offers a selection of omnidirectional stand-alone vertical antennas. These antennas will provide outstanding performance without the need of a ground plane. The JV-6 and the JV-2 will give 5 dBd more gain than a ground plane, while the JV-2X, JV-220X, and the JV-440X gives a 7 dBd improvement.

## ELECTRICAL

- Bandwidth ..... 50-54 MHz  
(x800 kHz)
- Gain ..... 5 dB/gnd plane
- VSWR ..... 1.5:1
- Feed Imp ..... 50 Ohms, unbal.

## ELECTRICAL

- Bandwidth ..... 144-148 MHz  
(x2 MHz)
- Gain ..... 5 dB/gnd plane
- VSWR ..... 1.5:1
- Feed Imp ..... 50 Ohms, unbal.

## ELECTRICAL

- Bandwidth ..... 144-148 MHz  
(x3 MHz)
- Gain ..... 7 dB/gnd plane
- VSWR ..... 1.5:1
- Feed Imp ..... 50 Ohms, unbal.

## ELECTRICAL

- Bandwidth ..... 219-226 MHz  
(x4 MHz)
- Gain ..... 7 dB/gnd plane
- VSWR ..... 1.5:1
- Feed Imp ..... 50 Ohms, unbal.

## ELECTRICAL

- Bandwidth ..... 420-470 MHz
- Gain ..... 7 dB/gnd plane
- VSWR ..... 1.5:1
- Feed Imp ..... 50 Ohms, unbal.

## ELECTRICAL

- Bandwidth ..... 27-30 MHz  
(x250 kHz)
- Gain ..... 3 dB gnd/plane
- VSWR ..... 1.5:1
- Feed Imp ..... 50 Ohms

## JV-6

## JV-2

## JV2X

## JV220X

## JV440X

## JV10

## MECHANICAL

- Element Length ..... 15 ft. max.
- Weight ..... 5 lbs.
- Mast ..... 2 in. O.D. max.

## MECHANICAL

- Element Length ..... 60 in.
- Weight ..... 1.5 lbs.
- Mast ..... 2 in. O.D. max.

## MECHANICAL

- Element Length ..... 11 ft.
- Weight ..... 2.1 lbs.
- Mast ..... 2 in. O.D. max.

## MECHANICAL

- Element Length ..... 88 in.
- Weight ..... 2 lbs.
- Mast ..... 2 in. O.D. max.

## MECHANICAL

- Element Length ..... 34 in.
- Weight ..... 1.1 lbs.
- Mast ..... 2 in. O.D. max.

## MECHANICAL

- Element Length ..... 27 ft.
- Windload ..... 1.8 sq.ft.
- Weight ..... 10 lbs.
- Mast ..... 2 in.



# COMMERCIAL COMMUNICATIONS

## Antennas

### Conservative Ratings!

Antenna specifications based on "real world" performance and measurements. All gain figures use the recognized half-wave dipole reference.

### Coverage!

KLM's use of two or more driven elements produces outstanding bandwidth coupled with nearly constant gain and low VSWR. Use one KLM antenna where coverage requirements would normally call for two or more!

### Construction!

All aluminum components of strong, weather-resistant 6063-T832 alloy. All stainless steel hardware except for U-bolts, Lexan, Teflon and other quality insulative materials.

## 134-138-14CP

### ELECTRICAL

- Model ..... C134-138-14CP
- Coverage ..... 134-138 MHz
- Gain ..... 11 dBdC
- VSWR ..... 1.5:1 and less
- Beamwidth ..... 3 dB pts: 48°
- Mounting ..... Center



### MECHANICAL

- Elements ..... 7H/7V
- Feed Imp ..... 50 Ohms, unbal.
- Balun ..... (2) 4:1, 2 kW
- Boom Length ..... 13 ft., 9 in.
- Boom Diameter ..... 1 1/2 in.
- Weight ..... 8 lbs.
- Mast ..... 2 in.

## 152-174 MHz ANTENNAS

This versatile series of VHF antennas utilizes KLM's multi-driven element system for broadband coverage while maintaining consistent gain and low VSWR. All beam antennas are suitable for horizontal or vertical polarization. All are supplied with KLM's own copper/Teflon Airline balun for a perfect match and clean patterns.

## 162-174-11

### ELECTRICAL

- Model ..... 162-174-11
- Coverage ..... 162-174 MHz
- Gain ..... 12.5 dBd
- VSWR ..... 1.5:1 and less
- Beamwidth ..... 42°
- Mounting ..... Center

### MECHANICAL

- Elements ..... 11
- Feed Imp ..... 50 Ohms, unbal.
- Balun ..... 1:1 sleeve, 2 kW
- Boom Length ..... 11 ft.
- Boom Diameter ..... 1 1/2 in.
- Weight ..... 5 1/4 lbs.
- Mast ..... 2 in.



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## 162-174-7

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### ELECTRICAL

•Model .....	162-174-7
•Coverage .....	162-174 MHz
•Gain .....	9 dBd
•VSWR .....	1.5: and less
•Beamwidth .....	54°
•Mounting .....	Center/Rear

### MECHANICAL

•Elements .....	7
•Feed Imp .....	50 Ohms, unbal.
•Balun .....	1:1 sleeve, 2 kW
•Boom Length .....	5 ft. 3 in.
•Boom Diameter .....	1 in.
•Weight .....	3 1/2 lbs.
•Mast .....	1 1/2 in.

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## 152-162-11

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### ELECTRICAL

•Model .....	152-162-11
•Coverage .....	152-162 MHz
•Gain .....	12.5 dBd
•VSWR .....	1.5:1 and less
•Beamwidth .....	42°
•Mounting .....	Center

### MECHANICAL

•Elements .....	11
•Feed Imp .....	50 Ohms, unbal.
•Balun .....	1:1 sleeve, 2 kW
•Boom Length .....	12 ft.
•Boom Diameter .....	1 1/2 in.
•Weight .....	5 1/2 lbs.
•Mast .....	2 in.

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## 152-162-9

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### ELECTRICAL

•Model .....	152-162-9
•Coverage .....	152-162 MHz
•Gain .....	11.5 dBd
•VSWR .....	1.5:1 and less
•Beamwidth .....	48°
•Mounting .....	Center

### MECHANICAL

•Elements .....	9
•Feed Imp .....	50 Ohms, unbal.
•Balun .....	1:1 sleeve, 2 kW
•Boom Length .....	8 ft.
•Boom Diameter .....	1 1/2 in.
•Weight .....	4.5 lbs.
•Mast .....	2 in.

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## HF LOG PERIODIC

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KLM's Log Periodic antennas offer extended coverage of the amateur bands and intermediate frequencies. The 10-30-7LPA, for example, covers 20, 15, and 10 meters plus the WARC bands and many MARS frequencies. The addition of the 40M-1 dipole module provides 40 meter operation as well. This system is also available complete as the 7.2/10-30 LPA. For continuous coverage from 6 to 30 MHz we offer our 6-30-15 LP. This twin antenna system offers significant advantages over a full-sized single-boom model. Wind loading, weight, tower size and rotational requirements are substantially reduced without any sacrifice in performance. The 6-30-15LPA can be mounted on a common tower and fed with a single 50 ohm line or mounted on adjacent towers and fed by separate lines.

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## 6-12-8LPA

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### ELECTRICAL

•Model .....	6-12--8LPA
•Coverage .....	6-12 MHz
•Gain .....	5.5-8 dbd
•VSWR .....	2:1 or less
•F/B .....	15 dB typ.
•Feed Input .....	50 Ohms, unbal.
•Balun .....	4:1, 5 kW

### MECHANICAL

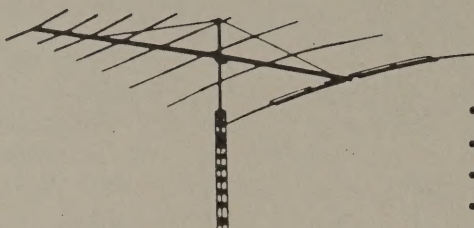
•Element Length .....	48 ft.
•Boom Length .....	46 ft.
•Turning Radius .....	33 ft.
•Windload .....	15.75 sq. ft.
•Weight .....	150 lbs.
•Mast .....	2 in.



## 7.2/10-30LPA

### ELECTRICAL

- Bandwidth ..... 7.2/10-30 MHz
- Gain ..... 3/7 dBd typ.
- VSWR ..... 1.5:1 typ.
- F/B ..... 10/15 dB
- Feed Imp ..... 50 Ohms, unbal.
- Balun ..... 4:1, 5 kW



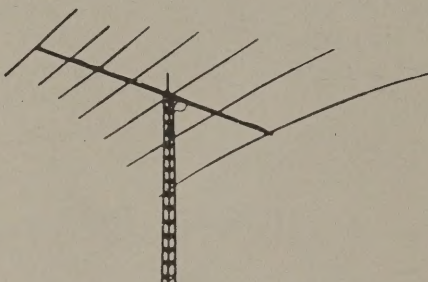
### MECHANICAL

- Element Length ..... 46 ft.
- Boom Length ..... 42 ft.
- Turn Radius ..... 32 ft.
- Windload ..... 12 sq. ft.
- Weight ..... 100 lbs.
- Mast ..... 2 in.

## 10-30-7LPA

### ELECTRICAL

- Bandwidth ..... 10-30 MHz
- Gain ..... 7 dBd typ.
- VSWR ..... 1.5:1 typ.
- F/B ..... 15 dB
- Feed Imp ..... 50 Ohms, unbal.
- Balun ..... 4:1, 5 kW



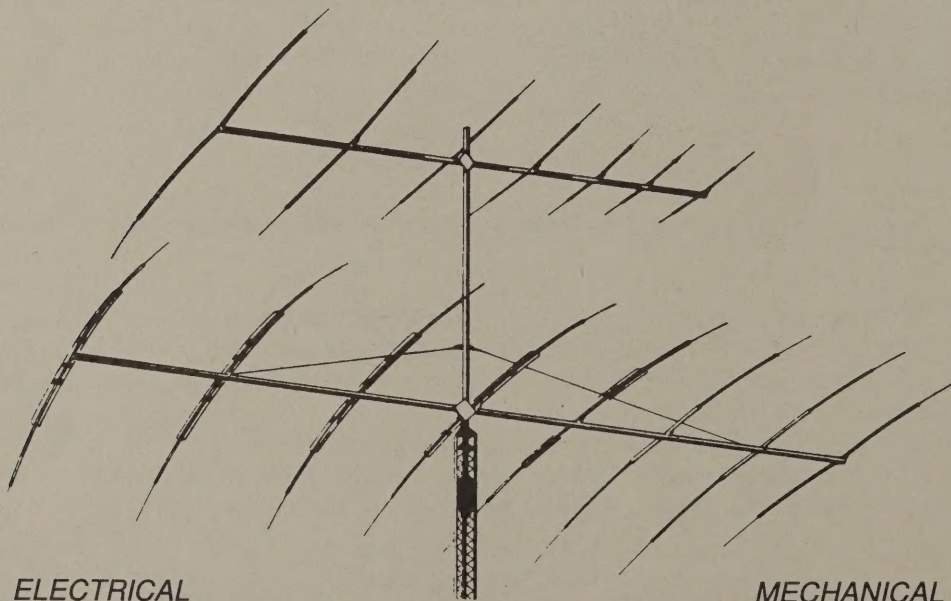
### MECHANICAL

- Element Length ..... 43 ft.
- Boom Length ..... 30 ft.
- Turn Radius ..... 26 ft.
- Windload ..... 8.25 sq. ft.
- Weight ..... 70 lbs.
- Mast ..... 2 in.

## 6-30-15LPA

### ELECTRICAL

- Coverage ..... 6-30 MHz
- Gain ..... 5.5 to 8 dBd
- VSWR ..... 2:1 and less, typ.
- F/B ..... 15 dB, typ.
- Feed Imp ..... 50 Ohms, unbal.
- Balun ..... (3) Ferrite 4:1, 5 kW PEP
- Weight ..... 150 lbs. (6-12-8)  
70 lbs. (10-30-7)



### MECHANICAL

- Elements ..... 8 (6-12-8)  
7 (10-30-7)
- Element Length ..... 48 ft.
- Boom Length ..... 46 ft. (6-12-8)  
30 ft. (10-30-7)
- Boom Diameter ..... 3 in.
- Turn Radius ..... 33 ft.
- Windload ..... 24 sq. ft.
- Mast ..... 2 in./3 in. standard



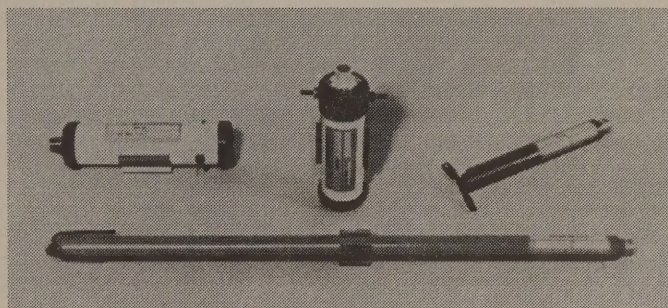
## ACCESSORIES

### Antenna Couplers/Power Divider

Broadband power divider/couplers are available for use in stacking VHF/UHF beams. These units replace the quarter-wave matching cable sections, barrel connectors, and "T" connectors that are ordinarily used. Matching input and output to 50 ohm impedances is automatic.

Use of these low loss devices results in significant savings in cost and complexity, and substantial reduction in cable and connector losses.

Construction is of copper tubing assuring minimal loss and providing excellent physical rigidity. The units are supplied with type "N" input and output connectors only. Power rating is conservatively 2 kW peak envelope power. They are "natural" for any array from two to thirty-two antennas. For experimenters, the 70 cm CS-2 Switcher is available as an accessory.



Part numbers indicate the band and the number of output ports.

2M-2N	2M-4N	220-4N	440-2N	440-4N
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### Baluns

When using balanced antennas with unbalanced coaxial lines, it is advisable to include a proper balun in order to ensure optimum broadband performance, low VSWR, and non-distorted patterns due to R.F. currents flowing in the coaxial sleeve.

### Sleeve Baluns

KLM quarter-wave sleeve baluns feature the same rigid low-loss copper tubing used in the coupler/power dividers. The air dielectric design assures lowest R.F. losses. SO-239 (UHF) connectors are standard for 2 meter and 220 MHz models, but type "N" connectors are available at no additional cost. Type "N" connectors are standard on the 450 MHz models.

Part Number	Impedance (Ohms)
2M-50	50 to 50
2M-50 (N)	50 to 50
220-50	50 to 50
220-50 (N)	50 to 50
440-50 (N)	50 to 50

### Ferrite Baluns

KLM ferrite baluns are constructed of high efficiency ferrite cores and Teflon-insulated silver-plated wire. The 3-60-4:1 balun contains four of these cores and is conservatively rated at 5 kW. The new 5 kW rating is made possible by the use of two additional oversize cores which are 35% larger than those used in the older 4 kW PEP balun which contained only two cores. Part number indicates the frequency range in MHz and the impedance ratio.

Model Number	Impedance (Ohms) (Unbalanced to Balanced)
3-60 MHz 1:1, 5 kW PEP	50 to 50
3-60 MHz 4:1, 5 kW PEP	50 to 200
6-52 MHz 4:1, 10 kW PEP	50 to 200

### Stacking Frame

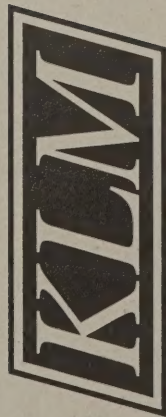
2M x 2C	2M x 4
220 x 2	220 x 4
432 x 2C	432 x 4C

### Coaxial Baluns

KLM coaxial baluns are constructed of Teflon dielectric, silver-plated shield and center conductor coaxial cable. The new high-frequency 1:1 balun is rated conservatively at 5 kW. The VHF/UHF 4:1 baluns are rated at 2 kW.

Part Number	Impedance (Ohms)
3-60-1:1 Coax (5 kW High Freq.)	50 to 50
2M-4:1 Coax (2 kW)	50 to 200
220-4:1 Coax (2 kW)	50 to 200
440-4:1 Coax (2 kW)	50 to 200





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